Performance Evaluation Techniques

Quality can be described as a level of excellence, or a degree of merit or worth. It is related to the effectiveness in achieving institutional goals, such as the degree to which educational offerings prepare students to be effective and capable within the circumstances of their lives and work.

Evaluating the effectiveness of Continuing Education (CE) programs includes a well-designed competency assurance program that includes performance and outcome indicators which correlate to the domains and tasks associated with the scope of practice of personnel. These indicators must be related to measurable objectives (see objectives section) that allow for comparison between actual performance and desired level of performance, whether the performance is based in the cognitive, psychomotor or affective domain.

Methods for evaluating the quality of educational offerings are many and varied. Written and skills evaluations of students are common tools used to assess the competency of the student, and thereby the quality of the educational program. However, without a baseline assessment of the knowledge or ability of the student, it is impossible to conclude that the educational program affected or improved the student's knowledge or ability rather than some other variable. For this reason, pre-testing, or the administration of an evaluation tool prior to participation in the educational program, is commonly used in education.

The goal of evaluation of the educational program and its participants is to verify the maintenance of minimum competency, and hopefully, improving knowledge, performance and competency. The Department of Transportation/National Highway Traffic Safety Administration (DOT/NHTSA) had defined three elements for determining minimum competency for EMS professionals. First, some aspect of the evaluation process should affirm the competence of the EMS professional as demonstrated in actual field performance. Second, the evaluation should defend that the EMS professional has the potential to respond appropriately to a wide range of problems, even though not all situations are commonly seen in the field. Lastly, CE should convey the professional attitudes and behaviors expected of the EMS professional.

It is usually not possible for every provider in an EMS system to be evaluated during the course of actual patient care delivery. Conventional methods of evaluating this element of competency determination places the student in an artificial situation such as a simulation or scenario to assess responses to hypothetical questions or situations. Performance can be best developed using checklist or published criteria for successful completion of the station, such as a skills check sheet. Additionally, realism improves the quality of the learning experience. Human patient simulators, moulage, victim coaching and quality acting can all enhance the learning and performance achieved.

Because it is not possible to provide new or review material on every possible patient situation, a quality educational program provides educational content based on the frequency and criticality of the information. Situations seen frequently that are of minor significance or risk to the patient or community, such as musculoskeletal injuries, may not be a primary focus of a CE program since everyday practice presents the learner with opportunities to review and utilize that information. However, a frequent but critical procedure, such as the accurate measurement of vital signs, may be incorporated each CE session via scenarios and simulations since the skills is very important to the quality of patient care provided. High frequency, high criticality issues, such as airway management, must also be a common element of a CE program to ensure that when the knowledge or skills are needed, the provider can access the information in a timely and competent fashion.

While a person may currently be a competent field provider, they may soon become incompetent due to the failure to keep up with constant changes in the art and science of medicine. Technical and professional persons are at significant risk of becoming outdated in their skills and knowledge. Some evidence suggests that after six months the skill degradation of an individual is as much as 30%! The profession is not static; perpetual change is the norm.

The expectation of educational programs is to change behavior. At the completion of the program, assurance of the performance goals should be met. Evaluation is conducted to gain information on how to improve future programs. A common tool used to evaluate education divides the analysis into four parts. Level one focuses on the learner's reaction to the educational program and is usually accomplished with a post-course questionnaire to determine their satisfaction with the program. Level two determines if learning has occurred. This is typically accomplished with a pre- and post-test written or skills evaluation. Level three focuses on job performance and application of information to real life. The evaluation of behavior is more difficult than the first two levels, but is usually accomplished using a preceptor or evaluator on the job, or during simulations or scenarios. Level four asks the ultimate question, "Has the education had a positive effect on patient outcomes?" While this is the most basic of educational evaluation questions, it is also the most difficult to evaluate. Patient outcomes have many variables, and are difficult to obtain and measure.

The tools used to evaluate the effectiveness of a student's performance and the quality of an educational program should be tailored to the learning goals and objectives, the type of program delivered, and the intended audience. There are many types of evaluation tools beyond the standard multiple-choice written exam. Short answer, oral, skills performance, and even media-based exams may be best to evaluate certain content. Constructing or choosing the proper exam type is just as important as delivering the information in the process of learning and evaluation.